IUCN Conservation Outlook Assessment 2017 **(archived)**
Finalised on 09 November 2017

Please note: this is an archived Conservation Outlook Assessment for Ischigualasto-Talampaya Natural Parks. To access the most up-to-date Conservation Outlook Assessment for this site, please visit https://www.worldheritageoutlook.iucn.org.

Ischigualasto-Talampaya Natural Parks

SITE INFORMATION

Country:
Argentina
Inscribed in: 2000
Criteria:
(viii)

Site description:
These two contiguous parks, extending over 275,300 ha in the desert region on the western border of the Sierra Pampeanas of central Argentina, contain the most complete continental fossil record known from the Triassic Period (245-208 million years ago). Six geological formations in the parks contain fossils of a wide range of ancestors of mammals, dinosaurs and plants revealing the evolution of vertebrates and the nature of palaeo-environments in the Triassic Period. © UNESCO

SUMMARY

2017 Conservation Outlook

Good

The two protected areas jointly forming the Ischigualasto-Talampaya Natural Parks World Heritage property cover some 275,000 hectares. The landscape and biodiversity have been subject to multiple use pressure before the establishment of protected areas, some of which have since been continuing illegally. Like many protected areas, the property is facing challenges from poaching, firewood harvesting, invasive and feral species, as well as road construction impacts against a backdrop of insufficient funding and staffing. It would thus be misleading to interpret the conclusion of this assessment as covering the overall status of the two contiguous protected areas. Rather, this assessment has the objective to provide an outlook according to the conservation values underpinning the World Heritage status. For the extraordinary geological values of the Ischigualasto-Talampaya Natural Parks, i.e. the complete sequence of fossiliferous continental sediments representing the entire 45 million years of geological history of the Triassic Period, the conservation outlook is assessed as good. However, the ongoing limitations in terms of harmonizing the governance and management of the two protected areas, resourcing and limited visitor management and law enforcement capacity need to be addressed.

Current state and trend of VALUES

Good
Trend: Data Deficient

Overall, the fossils of the property are not particularly vulnerable and adequately protected besides some illegal rock and fossil collection.

Overall THREATS

Low Threat

Despite reports of illegal rock and fossil collection, there are no significant

threats to the Outstanding Universal Value of the property, which is based on the unique geological particularities of the area. Livestock grazing, invasive alien species, poaching, nearby mining and the impacts of roads pose threats to all other conservation values, including landscape aesthetics and and rare endemic species of flora and fauna and require adequate management responses regardless of the lack of formal recognition of biodiversity and landscape values under the World Heritage Convention.

Overall PROTECTION and MANAGEMENT

Mostly Effective

The underlying gaps of management and protected can be traced to funding and staffing deficits. This results in limited effectiveness across most parameters typically considered in protected area management effectiveness assessments. The property is a large representative sample of an ecologically fascinating scrubland desert with a complex mountainous topography. The ecosystem provides habitat for a dryland vegetation and its many associated species which are under severe pressure. The protection and management of the important biodiversity values of the property is compromised by insufficient management response capacity to a range of threats. Nevertheless, and given that the World Heritage status is primarily associated with the less vulnerable geological values of the property, the concerns are limited from that narrow perspective.

FULL ASSESSMENT

Description of values

Values

World Heritage values

- **A complete sequence of fossiliferous continental sediments representing the entire Triassic Period**
  Criterion:(viii)

  The property is one of the rare natural World Heritage properties inscribed exclusively according to criterion (viii). The two contiguous protected areas jointly comprising the property contain a complete sequence of fossiliferous continental sediments representing the entire 45 million years of geological history of the Triassic Period. No other known place in the world has a comparable fossil record revealing the evolution of vertebrate life and the nature of palaeoenvironments in the Triassic Period (World Heritage Committee, 2014). Thereby, the property is of extraordinary scientific importance (IUCN, 2000).

Other important biodiversity values

- **Rare and endemic species**

  The area was nominated according to additional natural and cultural criteria (State Party of Argentina, 1999). The applicability of natural criteria other than what is today criterion (viii) was not supported in the technical evaluation though (IUCN, 2000) and the World Heritage Committee (2000) inscribed the property under criterion (viii) only. Nevertheless, the large property with a surface area of some 275,000 hectares does boast important

biodiversity values, which is fully acknowledged in the IUCN evaluation (IUCN, 2000). Specifically, the property is home to a relatively intact desert and scrubland environment in the Sierras Pampeanas mountains, the habitat of several endemic, near threatened or culturally valuable species of flora and fauna, including mammals, birds and reptiles (World Heritage Committee, 2014; UNEP-WCMC, 2011; IUCN, 2000).

► **Scenic values**

The Ischigualasto / Talampaya Natural Parks contain "scenic landscapes and features of great aesthetic and cultural value" (IUCN, 2000). Striking landscape features include the red sandstone cliffs in Talampaya National Parkt and, in Ischigualasto Provincial Park, white and multi-coloured sediments creating a stark landscape named “Valle de la Luna" or "Valley of the Moon” (World Heritage Committee, 2014).

Assessment information

Threats

Current Threats

Low Threat

There are no significant threats to the exceptional geological values of the property besides illegal collection of fossils, which is hard to prevent, especially in light of limited staffing and enforcement capacity. There are various threats, which are clearly identified in the management plans for both the national and the provincial protected area. They include feral and domestic livestock, the impacts of roads, poaching and firewood collection. All require management responses. From an admittedly narrow perspective of the specific justification for the World Heritage inscription of the property, the threats to the Outstanding Universal Value of the property are considered low.

► Livestock Farming / Grazing

High Threat
Inside site, widespread(15-50%)
Outside site

Cattle, horses, and donkeys from neighboring lands freely enter the property for grazing, thereby altering the composition of the native vegetation and competing with native herbivores (UNEP-WCMC, 2011, State Party of Argentina, 1999).

► Tourism/ visitors/ recreation

Low Threat
Inside site, extent of threat not known

Due to the high number of visitors not all visitors can be accompanied by professional rangers or guides or otherwise be supervised, respectively. Consequently, rocks with fossils are at times collected illegally by visitors (Cortez, 2005; IUCN, 2000; APN, 2001).

► Tourism/ visitors/ recreation

Low Threat
Inside site, localised(<5%)
Outside site

Most visitation occurs in a few selected parts of the property, in particular Valle de la Luna and Cañón de Talampaya (the Valley of the Moon and the Talampaya Gorge) (World Heritage Committee, 2014). Occasionally, access by off-road motorcycles has been reported (UNEP-WCMC, 2011). The impacts include littering and localized erosion from vehicle traffic in addition to some vandalism of rock art predating the establishment of the protected areas (UNEP-WCMC, 2011). The State Party of Argentina (1999) referred to waste as a "significant environmental pressure" at a time when visitor numbers were well below current numbers.

► Roads/ Railroads

Low Threat
Inside site, extent of threat not known

A major road (RN 150) crosses the property. A major piece of regional

infrastructure under construction (Corredor Bioceánico Central) will be fully functional upon completion of a planned tunnel to Chile. This is likely to result in a significant increase of traffic, including transportation to and from the Pacific Coast, which in one explicit project objective. Other risks include disturbance, road-kill and entry points for invasive aline species. The threat is ranked as a low threat from a formal perspective due to the World Heritage focus on geological values in this property.

► Invasive Non-Native/ Alien Species

Low Threat
Inside site, extent of threat not known
Outside site

European hare is widespread and so are feral donkeys and cattle, the latter two remnants of the former use of the property for livestock grazing (Administración de Parques Nacionales, 2001).

► Logging/ Wood Harvesting, Poaching

Low Threat
Inside site, extent of threat not known
Outside site

Illegal subsistence and recreational hunting is an occasional threat (UNEP-WCMC, 2011; Cortez, 2005; APN, 2001; IUCN, 2000). Poaching of wildlife is occurring within and near the property targeting for example Guanacos and Maras (Administración de Parques Nacionales, 2001). The same source makes reference to illegal collection of unspecified amounts of firewood. According to UNEP-WCMC (2011) the protected area staff is not adequately equipped to respond (see also Administración de Parques Nacionales, 2001).

Potential Threats

Low Threat

The threats stemming from possible future earthquakes cannot be quantified within the scope of this assessment. Mining has been reported to pose a threat (WWF, 2015). Given that no impacts of mining on the specific World Heritage values within the property are expected, the threat is ranked as low.

► Mining/ Quarrying

Low Threat
Outside site

While there was small-scale coal extraction in Ischigualasto before the establishment of the protected area and mining continues to play a role in adjacent communities (UNEP-WCMC, 2011), there appear to no major current concerns about possible threats. However, WWF (2015) suggests oil and gas concessions as a risk to the property, albeit without providing any detail on the background. The management plan for the provincial park refers to important mining development in the region (Gobierno de la Provincia de San Juan, 2015).

► Earthquakes/ Tsunamis

Data Deficient
Inside site, extent of threat not known
Outside site

The property is located on the eastern edge of the highly active Andes earthquake zone (State Party of Argentina, 1999). The exact risks and possible consequences for the World Heritage values are beyond the scope of this assessment.

Protection and management

Assessing Protection and Management

► Relationships with local people

Some Concern

There are no residents within the property and a limited number in its vicinity. At the time of the establishment of the protected areas, the use restrictions in terms of grazing and firewood collection are likely to have resulted in tensions. It can be argued that the property generates employment and income by attracting conventional and scientific tourism to the region. It is assumed that this results in support to the property (UNEP-

WCMC, 2011).

► Legal framework

Mostly Effective

Both areas are on public lands and have strong legal protection. While both protected areas were first established at the provincial level, Talampaya became a national park under federal responsibility in 1997. There is some concern about the legal, governance and management coherence of the two distinct protected areas jointly comprising the property. More importantly, there are question marks as regards compliance and enforcement due to modest human and financial resources in both protected areas. Medina et al. (2016) point out that legal conservation frameworks in Argentina tend to ignore or neglect geological aspects even though quite a few protected areas have primarily been established in the ground of geological values, as is the case in the property.

► Enforcement

Some Concern

Law enforcement is consistently described as very limited (Gobierno de la Provincia de San Juan, 2015; UNEP-WCMC, 2011; Administración de Parques Nacionales, 2001; IUCN, 1999). This can be linked to limited staffing levels and eventually funding constraints while keeping in mind the large size of the property.

► Integration into regional and national planning systems

Some Concern

Besides integration into regional and national tourism planning (UNEP-WCMC, 2011) there are limited efforts only to manage the property as part of the wider Monte ecoregion of Argentina. Since the former Talampaya Provincial Park became a national park in 1997 it has been an integral element of Argentina's federal protected area system.

► Management system

Mostly Effective

Management of the property is guided by management plans and public use

plans; coordination of management between the federal and provincial parks is carried out by a Management Coordination Committee for the whole property, a critical and challenging management requirement (World Heritage Committee, 2014). However, human and financial resources are inadequate to allow for the implementation of management plans (Gobierno de la Provincia de San Juan, 2015; UNEP-WCMC, 2011; Administración de Parques Nacionales, 2001).

► Management effectiveness

Some Concern

Management effectiveness with respect to the protection of geological features is relatively good, but staff levels are insufficient to protect the site’s biodiversity from poaching, grazing by exotic and feral animals and cutting of firewood etc. A recent management effectiveness assessment was carried out for Ischigualasto Provincial Park (Gobierno de la Provincia de San Juan, 2015): out of 5 main areas assessed none was rated "very satisfactory" and only one "satisfactory" (political and institutional framework). All else where rated either "medium" (financing, infrastructure and equipment) or "not very satisfactory" (staff, planning). While not up to date, the management plan for Talampaya National Park hints at roughly comparable patterns in terms of challenges and insufficient management response capacity.

► Implementation of Committee decisions and recommendations

Some Concern

The independent technical evaluation of the World Heritage nomination reported that the national and provincial authorities were establishing "a single cooperative management regime for the site" (IUCN, 1999). The evaluation further notes that "joint management will be provided by a standing Coordinating Committee, assisted by a single Technical Advisory Group representative of key local
scientific institutions, provincial agencies and non-governmental conservation organisations" to "ensure the application of uniform management policies, programmes and standards across the entire site." The World Heritage Committee (2000) made reference to this "positive response was received from the State Party concerning a cooperative management plan". While not constituting a request or recommendation this

can be interpreted as an expectation of follow-up in this regard. However, a lack of harmonizing management across the two distinct legal, governance and management set-ups continues to be a reason for concern.

▶ Boundaries

Mostly Effective

The boundaries cover a vast area, which is adequate in its configuration. Demarcation is missing in many areas and appear to be unknown to local communities (Administración de Parques Nacionales, 2001).

▶ Sustainable finance

Serious Concern

All main sources agree on the lack of adequate financial resource to manage the large property (Gobierno de la Provincia de San Juan, 2015; Administración de Parques Nacionales, 2001; IUCN, 1999).

▶ Staff training and development

Mostly Effective

The few park rangers at Talampaya National park and Ischigualasto Provincial Park are well trained, Argentina being the one country in the region with systematic, professional ranger training. The challenge is primarily the very limited staff numbers.

▶ Sustainable use

Mostly Effective

Tourism and scientific study are the only legally permitted direct uses and both are carried out adequately overall despite localized concerns about tourism impacts (UNEP-WCMC, 2011).

▶ Education and interpretation programs

Data Deficient

Both areas have the explicit objective to educate visitors. The recent management plan for the provincial protected area rates the corresponding specific planning in the second-lowest of 5 effectiveness categories (Gobierno de la Provincia de San Juan, 2015). The management plan for the

national park establishes a specific sub-programme under the public use programme (Administración de Parques Nacionales, 2001), the effectiveness of which is unknown.

► Tourism and visitation management

Some Concern

At the time of inscription, visitor infrastructure was evaluated as modest (IUCN, 2000), as acknowledged by the State Party at the time (State Party of Argentina 1999). Many years later, visitor centers were still reported to require improvement and to be unable to cope with visitation peaks. Recent and ongoing project support (see below) explicitly addresses such deficits.

► Monitoring

Some Concern

UNEP-WCMC (2011) reports monitoring of ground water, wild and domestic animals, vegetation and tourism without further specification. The management plan for the national park articulates one sub-programme dedicated to research and monitoring, acknowledging that baselines are scarce and difficult to get hold of (Administración de Parques Nacionales, 2001). The management effectiveness assessment documented in the management plan for the provincial protected area suggests that "some monitoring instruments are being applied" (Gobierno de la Provincia de San Juan, 2015). This wording implies that there is room for developing a systematic and comprehensive monitoring system.

► Research

Mostly Effective

Research is one explicit objective and among the very limited legal use options of the property (Gobierno de la Provincia de San Juan, 2015; Administración de Parques Nacionales, 2001). There is a long tradition of geological and specifically paleontological research in the area, which has generated a wealth of information. To a lesser extent, there is research on the ecology and biology of the scrubland desert. More recently, there have been strong efforts to understand the impacts of existing and planned road infrastructure, which can and should be linked to political decision-making.

Overall assessment of protection and management

Mostly Effective

The underlying gaps of management and protected can be traced to funding and staffing deficits. This results in limited effectiveness across most parameters typically considered in protected area management effectiveness assessments. The property is a large representative sample of an ecologically fascinating scrubland desert with a complex mountainous topography. The ecosystem provides habitat for a dryland vegetation and its many associated species which are under severe pressure. The protection and management of the important biodiversity values of the property is compromised by insufficient management response capacity to a range of threats. Nevertheless, and given that the World Heritage status is primarily associated with the less vulnerable geological values of the property, the concerns are limited from that narrow perspective.

▶ Assessment of the effectiveness of protection and management in addressing threats outside the site

Data Deficient

There are no direct indications of major pressures stemming from outside the property. The management plans pay very limited attention to external challenges (Gobierno de la Provincia de San Juan, 2015; Administración de Parques Nacionales, 2001). There is insufficient information to permit a conclusive assessment within the scope of this effort.

▶ Best practice examples

Regardless of the effectiveness of harmonizing the governance and management of the overall area, it is an encouraging example that the national and a sub-national level of a State Party government have joined forces to successfully nominate two contiguous protected areas under their corresponding jurisdictions.

State and trend of values

Assessing the current state and trend of values

World Heritage values

▶ **A complete sequence of fossiliferous continental sediments representing the entire Triassic Period**

Good
Trend:Stable

The geological features of the property are effectively protected despite some illegal rock and fossil collection and not particularly vulnerable (UNEP-WCMC, 2011; Administración de Parques Nacionales, 2001, IUCN, 2000).

Summary of the Values

▶ **Assessment of the current state and trend of World Heritage values**

Good

Trend: Data Deficient

Overall, the fossils of the property are not particularly vulnerable and adequately protected besides some illegal rock and fossil collection.

▶ **Assessment of the current state and trend of other important biodiversity values**

High Concern

Trend: Deteriorating

As acknowledged in the management plans for both protected areas (Gobierno de la Provincia de San Juan, 2015; Administración de Parques Nacionales, 2001), there is some degradation of the natural vegetation stemming from livestock grazing and fuelwood collection. It can be argued that degradation of the natural vegetation from livestock grazing and fuelwood collection, as well as the increasing road infrastructure, including the construction of a major international transportation route, negatively affect the landscape beauty. A detailed assessment in beyond the scope of this exercise due to the World Heritage focus on fossils. There are credible hints at a deteriorating trend of some rare and endemic species as protected

area management (UNEP-WCMC, 2011; IUCN, 2000).

Additional information

Benefits

Understanding Benefits

▶ **Importance for research, Contribution to education**

The property is a major, globally significant scientific treasure, invaluable for research in palaeontology and evolutionary biology. The spectacular fossils create major opportunities for visitor education.

▶ **Outdoor recreation and tourism, Natural beauty and scenery**

Domestic and international visitation attracted by the scenic beauty and the spectacular fossils is relatively modest but growing.

▶ **Direct employment, Tourism-related income, Provision of jobs**

Scientific and conventional tourism, as well as to a lesser degree park management, provide local employment and income opportunities.

Summary of benefits

The most striking benefit is the extraordinary scientific significance of the property, which comes with major opportunities in terms of scientific research and visitor education. Economically, both park management requirements and tourism offer local income and employment opportunities.

Projects

Compilation of active conservation projects

№	Organization/ individuals	Project duration	Brief description of Active Projects
1	Tourism Corridors Development Programme (Programa de Desarrollo de Corredores Turísticos), IADB/BID		Facilitated by an IADB/BID loan (Préstamo BID 2606/OC-AR), the programme has the objectives to take advantage of protected areas as destinations by developing touristic products, strengthening institutions and improving environmental management. The property is located within one of several corridors in Argentina (Valle Fértil–Villa Unión - Corredor Ischigualasto - Agua Negra).
2	New park management infrastructure in Talampaya National Park (World Bank)		Earlier this year, a World Bank loan project was launched to facilitate the construction of a new national park headquarters and additional management infrastructure.

Compilation of potential site needs

№	Site need title	Brief description of potential site needs	Support needed for following years
1	Mitigation of road impacts	The direct and indirect impacts of roads are well-documented. Specific studies have identified conflicts with conservation objectives, including key locations of such conflicts, in particular in Ischigualasto Provincial Park (Borghi et al., 2012). The concern is that the full development of a major road infrastructure project currently underway ("Corredor Bioceánico Central") will increase the conflicts along the approximately 45 kilometers of the road crossing the provincial park. Follow up to better understand and to the degree possible mitigate concerns could build upon readily available scientific analysis. It would have to be integrated in the infrastructure development project.	

REFERENCES

№	References
1	Administración de Parques Nacionales, 2001. Plan de Manejo, Fase II. Parque Nacional Talampaya. . Accessed 2 February 2017.
2	Borghi, C.E., Campos, C.M., Ortuño, N., Beninato, V., Andino, N., Campos, V., De los Ris, C., Cappa, F., Giannoni, S.M. 2012. Efeitos indiretos sobre a fauna do Corredor Bioceânico Central em uma área protegida do deserto do Monte: Parque Provincial Ischigualasto. In Bager, A. 2012. Ecologia de Estradas - Tendências e Pesquisas. Universidade Federal de Lavras, Brasil.
3	Campos, C. M., Borghi, C.E., Campos, V.E., Cappa, F., Fernández, V., Beninato, V., Giannoni, S.M. 2014. La Conservación de los Bosques Nativos y su Biodiversidad Asociada: El Caso del Parque Provincial Ischigualasto (San Juan, Argentina). Revista Forestal Baracoa 33 (Número Especial): 431- 440.
4	Gobierno de la Provincia de San Juan. 2001. Zonificación del Parque Provincial Ischigualasto. Dirección de Política Ambiental. Secretaria de Obras Publicas y Medio Ambiente. Ministerio de Obras y Servicios Públicos y Medio Ambiente. San Juan, Argentina. . Accessed 2 February 2017.
5	Gobierno de la Provincia de San Juan. 2015. Plan de Manejo del Parque Natural Provincial Ischigualasto. Patrimonio Natural de la Humanidad. Tomo I. Caracterización y Diagnóstico. Tomo II. Zonificación, Estatuto Jurídico y Programas de Manejo. Actualización 2015 – 2025.
6	IUCN. 2000. World Heritage Nomination – IUCN Technical Evaluation, Ischigualasto Provincial Park-Talampaya National Park (Argentina). In: IUCN World Heritage Evaluations 2016, IUCN Evaluations of nominations of natural and mixed properties to the World Heritage List. WHC-00/CONF.204/INF.05. Gland, Switzerland: IUCN. Accessed 2 February 2017.
7	IUCN. 2014. Ischigualasto/Talampaya Natural Parks (Argentina) Site Assessment. The IUCN World Heritage Outlook. . Accessed 2 February 2017.
8	Medina, W., Vejsbjerg, L., Aceñolaza, G. 2016. Marco legal de la geoconservación. Presencia de la geología en las leyes de áreas protegidas de la República Argentina. Rev. Mus. Argentino Cienc. Nat.18(1): 53-64.
9	Rariza Ingeniería Ambiental y Sanitaria. 2015. Estudio de Impacto Ambiental. Nombre del Proyecto: Reordenamiento de la Recepción Del Sector Ingreso Al Parque Provincial Ischigualasto, San Juan, Corredor Villa Unión – Valle Fértil (Región Cuyo). Programa De Desarrollo de Corredores Turísticos Préstamo BID 2606/OC-AR.

№	References
10	Roig, V.G. 1991. Desertification and distribution of mammals in the southern cone in South America. In: Mares, M.A.; Schmidly, D. (eds), Latin America Mammalogy. History, biodiversity, and conservation, pp 239-279. Norman: University of Oklahoma Press. 468 pp.
11	State Party of Argentina. 1999. World Heritage nomination: Natural – Cultural Parks Ischigualasto-Talampaya. . Accessed 2 February 2017.
12	UNEP-WCMC. 2011. Ischigualasto / Talampaya Natural Parks, Argentina. UNEP-WCMC World Heritage Information Sheets. Cambridge, UK.
13	WWF. 2015. Protecting People through Nature. Natural World Heritage Sites as Drivers of Sustainable Development. Dalberg Global Development Advisors.
14	World Heritage Committee. 2014. Decision 38 COM 8E Statement of Outstanding Universal Value Ischigualasto / Talampaya Natural Parks (Argentina). Doha, Qatar. . Accessed 2 February 2017.